

FLIGHT EXPERIMENT RESOURCE WORKSHEET

I. General Information

Principal Investigator: _____

Investigation/Activity title: _____

Type of Study (check one). Also indicate the minimum number of days on-orbit required:
NOTE: Proposals should **not** be submitted for short duration research on the Space Shuttle.

		On-orbit Duration Required (minimum)
<input type="checkbox"/>	Long Duration; Pre/Postflight only	
<input type="checkbox"/>	Long Duration; Pre/In/Postflight	
<input type="checkbox"/>	Long Duration; In-Flight only	

How many subjects are required?

- a. Long Duration:
- b. Ground control:

II. Pre- and Post-Flight Baseline Data Collection (BDC) Requirements

1. Provide a pre- and postflight testing schedule for baseline data collection (BDC). Include the name of the test/activity, dates required (L-X days preflight, R+X days postflight, R+0 indicating landing day), and estimated crew time requirements in the table below. Crew time estimates should reflect the time required for testing of one subject. NOTE: Training sessions should not be included unless they are considered part of the data set.

Preflight Test/Activity	Schedule	Crew Time (min)		Postflight Test/Activity	Schedule	Crew Time (min)	
		per session	total			per session	total
<i>E.g., DEXA</i>	<i>L-180 and L-45</i>	<i>60</i>	<i>120</i>	<i>DEXA</i>	<i>R+6 and R+180</i>	<i>60</i>	<i>120</i>
TOTAL PREFLIGHT BDC (per subject)				TOTAL POSTFLIGHT BDC (per subject)			

2. Launches and landings of long-duration crewmembers will occur in Russia (via Soyuz) until the Orion vehicle is available. Please address the following:
- a. If preflight BDC is required within 30 days of launch and/or postflight BDC is required within the first 1-2 weeks of landing, can these tests be performed in Russia (check one)?
☐ Yes ☐ No
 - b. BDC requiring test equipment in Russia will have to remain there for the duration of the experiment (only consumables and supplies will be shipped routinely). Do you have sufficient quantities of required equipment to support BDC activities at JSC and Russia?
 - c. Do you have any unique facility requirements for conducting BDC and/or performing analysis of data in Russia or at JSC? If so, please describe below.
3. There is no immediate access to crewmembers returning via Soyuz on landing day, therefore it is often not feasible to schedule BDC on R+0. If you have an R+0 requirement, please state whether or not this is a firm requirement; i.e., what are the science impacts of delaying the session to R+1 and, if this occurs, are the objectives of the experiment compromised (i.e., will those subjects not count towards the study "n"?).
4. The amount of time available for BDC in the first week post-flight is extremely limited. If you have additional requirements in the R+0 to R+7 day timeframe that are not addressed in #3 above, for each session please explain any flexibilities in the schedule and provide the impact if the session cannot be scheduled by R+7 days.

III. In-Flight Requirements:

1. Provide an in-flight testing schedule in the table below. Include the name of the test/activity, dates required (Mission Day (MD) X days in-flight), and estimated crew time requirements in the table below. Crew time estimates should reflect the time required for testing of one subject; however, if an operator is required for an in-flight activity, their time should be included as well. Activities that are performed once regardless of the number of participants (e.g., set-up and stow) should be listed separately. Please assume a six-month mission in calculating the crew time estimates.

Test/Activity	Schedule	Crew time (min)	
		per session	total
<i>E.g., Experiment Protocol (per subject)</i>	<i>MD 30 and monthly thereafter</i>	<i>60</i>	<i>360</i>
TOTAL IN-FLIGHT CREW TIME (per subject)			

- a. Is real-time data transmittal either required or highly desirable? (*NOTE: “Required” means that the experiment cannot be performed if downlink is not available; “highly desired” means that the experiment data will be transmitted if the downlink is available.*)
- b. How critical is the timing of the in-flight sessions? Please explain any flexibilities in the schedule provided in the table above. Examples of in-flight timing requirements that may be difficult to implement are: early in-flight (especially during the first 10 days and through the 3rd or 4th week), late in-flight, any activity that must be performed daily or weekly, and any activity requiring precisely timed operations.

2. Please list all of the flight hardware required for in-flight data collection along with the quantity required (indicate if item is for one subject, one increment, etc.) and the estimated total mass and volume for the given quantity (N/A for equipment already on board ISS). In the comments, provide additional explanatory information such as development status, past flight history, assumptions made when calculating quantities required, etc. If new flight hardware is required, indicate in the comments if it is Commercial-Off-The-Shelf (COTS) or if it will be experiment unique equipment.

Hardware Item	Qty.	Mass (kg)	Volume (m ³)	New, Previously Flown, or On-Orbit (specify)	Comments
<i>E.g., Urine Collection Kit</i>	<i>5 kits/ 3 subj.</i>	<i>10</i>	<i>0.045</i>	<i>Previously Flown</i>	<i>Flown on ISS Increments 3-6, 8, & 11-12; five kits provide supplies for three 24 hr urine collections with three subjects</i>

3. If flight software is required, please answer the following:

- Is the software experiment-unique or commercial off-the-shelf?
- If it is experiment-unique, what is the status of development and who is the developer?

4. Storage of equipment and samples (for all flight experiments):

Is temperature control of equipment/supplies needed:	Yes	No	Not Known	Temperature (°C)	Estimated Volume (cm ³ or <i>x</i> number of <i>y</i> ml vials)
-- for launch?					
-- in flight?					
-- for return?					

5. Can all of your flight hardware and supplies be stowed for launch at L-2 months? ☐ Yes ☐ No

If "No", list each item that must be late-loaded along with the L-requirement (indicate if units are in hours or days):

6. Do any flight hardware or supply items expire in two years or less? ☐ Yes ☐ No

If "Yes", list each item along with estimated shelf life (indicate if units are in days or months):

7. Return of hardware and samples will be extremely difficult after Space Shuttle retirement. Does your experiment require timely return of hardware or samples? ☐ Yes ☐ No

If "Yes", explain the nature of the requirement and the impacts if it cannot be met. Also indicate if early retrieval of items is required.